CW#10: Missing Angles

Geometry

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

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| **CRS** | PPF 402 Exhibit knowledge of basic angle properties and special sums of angle measure (e.g., 90, 180 and 360) |
| **Objective** | 2.4 Find the missing angle in a complex figure or description using angle pair relationships |

**Vocabulary Review**

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| Angle/Relationship | Definition | Example |
| Complementary angles |  |  |
| Supplementary angles |  |  |
| Vertical angles |  |  |
| Linear pair |  |  |
| Congruent angles |  |  |

**We also know that there are \_\_\_\_\_\_\_\_\_\_\_\_ in a full circle or rotation.**

Steps to solving for a missing angle in a complex figure or description:

**Step 1:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the angle you are asked to find.

**Step 2:** Identify the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ you have already been given.

**Step 3:** If necessary, draw a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Step 4:** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ into the figure other information that you know.

**Step 5:** Using all of this information, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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| Example 1: Find the measure of b. | Example 2: Find the measure of b. |
| You Try!  1. Find the measure of b. | You Try!  2. Find the measure of b. |
| Example 3: Find the measure of b. | Example 4: Find the measure of b. |
| You Try!  3. Find the measure of b. | You Try!  4. Find the measure of b. |
| You Try!  5. Find the measure of b. | You Try!  6. Find the measure of b. |
| Example 5:  Name the measure, in degrees, of the following angle on a clock. | Example 6:  What is the measure, in degrees, of the angle between the hands of a standard clock and exactly 4:00? |
| You Try!  7. Name the measure, in degrees, of the following angle on a clock. | You Try!  8. What is the measure, in degrees, of the angle between the hands of a standard clock and exactly 3:00? |
| Example 6:  In the figure below, all lines intersect at point X with angle measures as marked. What is the measure of AXC?  A B  F 46 X  C  53  E D | You Try!  9. In the same figure, what is the measure of FXE?  You Try!  10. In the same figure, what is the measure of FXD? |

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| 11. Find the measure, in degrees, of the following times.     1. Exactly 2:00 2. Exactly 6:00 3. Exactly 1:00 | 12. In the figure below, all lines intersect at point X with angle measures as marked. Find the measurement of the following angles.  A B  14 C  X  F    E D   1. FXA 2. FXD |

Challenge

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| In the flag shown, ∠*MNP* is a straight angle and bisects ∠*MNP* and ∠*QNS.*  *NR*     1. Which angles are acute? obtuse? right? 2. Identify the congruent angles. 3. If *m*∠*QNR =* 30°, find *m*∠*MNR, m*∠*RNS, m*∠*QNS,* and *m*∠*QNP.* |